



**UNITED STATES OF AMERICA
FEDERAL COMMUNICATIONS COMMISSION
RADIO STATION AUTHORIZATION**

Name: Harris CapRock Communications, Inc.
 Authorization Type: Modification of License
 Non Common Carrier

Call Sign: E090176

File Number: SES-MOD-20151210-00928

Grant date: 02/25/2016 Expiration Date: 01/08/2025



Nature of Service: Other

Class of Station: Other

A) Site Location(s)

#	Site ID	Address	Latitude	Longitude	Elevation (Meters)	Special Provisions NAD (Refer to Section H)
1)	Int v240M	4400 S. SAM HOUSTON PKWY, E. U.S. AND INTERNATIONAL WATERWAYS HOUSTON, TX 77046				NA
		Licensee certifies antenna(s) comply with gain patterns specified in Section 25.209				
2)	Int v240M	4400 S. SAM HOUSTON PKWY, E. U.S. AND INTERNATIONAL WATERWAYS HOUSTON, TX 77046				27
		Licensee certifies antenna(s) comply with gain patterns specified in Section 25.209				
3)	ORB7108	GULF OF MEXICO, US CHANNELS & WATERWAYS CARIBBEAN SEA, POR, AOR LA				83
		Licensee certifies antenna(s) do not comply with Section 25.209. Please refer to Section E for special conditions placed upon antennas at this site.				
4)	ORB7109	GULF OF MEXICO, US CHANNELS & WATERWAYS CARIBBEAN SEA, POR, AOR LA				83
		Licensee certifies antenna(s) do not comply with Section 25.209. Please refer to Section E for special conditions placed upon antennas at this site.				
5)	Oceans	GULF OF MEXICO, US CHANNELS & WATERWAYS CARIBBEAN SEA, POR, AOR Gulf of Mexico, TX	0°0'0.0"N	0°0'0.0"W	0	83
		Licensee certifies antenna(s) do not comply with Section 25.209. Please refer to Section E for special conditions placed upon antennas at this site.				



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Subject to the provisions of the Communications Act of 1934, The Communications Satellite Act of 1962, subsequent acts and treaties, and all present and future regulations made by this Commission, and further subject to the conditions and requirements set forth in this license, the grantee is authorized to construct, use and operate the radio facilities described below for radio communications for the term beginning January 8, 2010 (3 AM Eastern Standard Time) and ending January 8, 2025 (3 AM Eastern Standard Time) . The required date of completion of construction and commencement of operation is February 25, 2017 (3 AM Eastern Standard Time) . Grantee must file with the Commission a certification upon completion of construction and commencement of operation.

B) Particulars of Operations

The General Provision 1010 applies to all receiving frequency bands.
 The General Provision 1900 applies to all transmitting frequency bands.
 For the text of these provisions, refer to Section H.

#	Frequency (MHz)	Polarization Code	Emission	Tx/Rx Mode	Max EIRP /Carrier (dBW)	Max EIRP Density /Carrier (dBW/4kHz)	Associated Antenna	Special Provisions (Refer to Section H)	Modulation/ Services
1)	5925.0000-6425.0000	H, V	1M85G7D	Tx	56.70	30.05	ORB7108		DIGITAL
2)	3700.0000-4200.0000	H, V	1M85G7D	Rx			ORB7108		DIGITAL
3)	5925.0000-6425.0000	H, V	1M85G7D	Tx	56.70	30.05	ORB7109		DIGITAL
4)	3700.0000-4200.0000	H, V	1M85G7D	Rx			ORB7109		DIGITAL
5)	5925.0000-6425.0000	H, V	1M85G7D	Tx	57.00	31.00	Seatel9797		Digital
6)	5925.0000-6425.0000	H, V	200KG7W	Tx	47.70	31.00	Seatel9797		Digital
7)	3700.0000-4200.0000	H, V	1M85G7D	Rx	0.00	0.00	Seatel9797		Digital
8)	3700.0000-4200.0000	H, V	200KG7W	Rx	0.00	0.00	Seatel9797		Digital
9)	5925.0000-6425.0000	H, V	1M00G7D	Tx	48.90	24.90	V240M(C)		UP TO 32 APSK
10)	5925.0000-6425.0000	H, V	20M0G7D	Tx	61.90	24.90	V240M(C)		UP TO 32 APSK
11)	3700.0000-4200.0000	H, V	1M00G7D	Rx			V240M(C)		UP TO 32 APSK
12)	3700.0000-4200.0000	H, V	20M0G7D	Rx			V240M(C)		UP TO 32 APSK
13)	14000.0000-14500.0000	H, V	1M00G7D	Tx	53.30	29.30	V240M(KU)		UP TO 32 APSK
14)	14000.0000-14500.0000	H, V	20M0G7D	Tx	66.30	29.30	V240M(KU)		UP TO 32 APSK
15)	11700.0000-12200.0000	H, V	1M00G7D	Rx			V240M(KU)		UP TO 32 APSK
16)	11700.0000-12200.0000	H, V	20M0G7D	Rx			V240M(KU)		UP TO 32 APSK



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C) Frequency Coordination Limits

#	Frequency Limits (MHz)	Satellite Arc (Deg. Long.)		Elevation (Degrees)		Azimuth (Degrees)		Max EIRP Density toward Horizon (dBW/4kHz)	Associated Antenna(s)
		East Limit	West Limit	East Limit	West Limit	East Limit	West Limit		
1)	5925.0000-6425.0000								Seatel9797
2)	3700.0000-4200.0000								Seatel9797
3)	5925.0000-6425.0000								ORB7108
4)	3700.0000-4200.0000								ORB7108
5)	5925.0000-6425.0000								ORB7109
6)	3700.0000-4200.0000								ORB7109
7)	5925.0000-6425.0000	19.0W-168.0W		10.0-10.0		090.0-270.0		-9.5	V240M (C)
8)	3700.0000-4200.0000	19.0W-168.0W		10.0-10.0		090.0-270.0			V240M (C)
9)	14000.0000-14500.0000	19.0W-168.0W		10.0-10.0		090.0-270.0		-12	V240M (KU)
10)	11700.0000-12200.0000	19.0W-168.0W		10.0-10.0		090.0-270.0			V240M (KU)

D) Points of Communications

The following stations located in the Satellite orbits consistent with Sections B and C of this Entry:

- 1) Oceans to Eutelsat 113 WA (S2695) @ 113 degrees W.L. (formerly SATMEX 6) (Mexico-licensed)
- 2) Oceans to INTELSAT 707 satellite @ 53 W.L. of the INTELSAT system (U.S.-licensed)
- 3) Oceans to SATMEX-5 @ 116.8 W.L. (Mexico-licensed)
- 4) Oceans to Permitted Space Station List
- 5) ORB7108 to INTELSAT 605 satellites @ 332.5 E.L. of the INTELSAT system (U.S.-licensed)
- 6) ORB7108 to Permitted Space Station List
- 7) ORB7109 to INTELSAT 605 satellites @ 332.5 E.L. of the INTELSAT system (U.S.-licensed)
- 8) ORB7109 to Permitted Space Station List
- 9) Int v240M to Permitted Space Station List
- 10) Int v240M to Permitted Space Station List



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E) Antenna Facilities

Site ID	Antenna ID	Units	Diameter (meters)	Manufacturer	Model number	Site Elevation (Meters)	Max Antenna Height (Meters)	Special Provisions (Refer to Section H)
ORB7108	ORB7108	250	2.4	ORBIT	7108			
Max Gains(s):		39.0 dBi @	3.9500 GHz	39.9 dBi @	6.4000 GHz			
Maximum total input power at antenna flange (Watts) =					50.00			
Maximum aggregate output EIRP for all carriers (dBW) =					56.92			
ORB7109	ORB7109	250	2.4	ORBIT	7109			
Max Gains(s):		38.5 dBi @	3.9500 GHz	41.0 dBi @	6.4000 GHz			
Maximum total input power at antenna flange (Watts) =					50.00			
Maximum aggregate output EIRP for all carriers (dBW) =					57.99			
Oceans	Seatel9797	250	2.4	Seatel	9797	0	0 AGL/ 0 AMSL	
Max Gains(s):		38.5 dBi @	4.0000 GHz	41.3 dBi @	6.0400 GHz			
Maximum total input power at antenna flange (Watts) =					37.15			
Maximum aggregate output EIRP for all carriers (dBW) =					57.00			
Int v240M	V240M(C)	100	2.4	INTELLIAN	V240M			
Max Gains(s):		38.3 dBi @	3.9100 GHz	41.9 dBi @	6.1375 GHz			
Maximum total input power at antenna flange (Watts) =					112.50			
Maximum aggregate output EIRP for all carriers (dBW) =					61.90			
Int v240M	V240M(KU)	100	2.4	INTELLIAN	V240M			
Max Gains(s):		47.5 dBi @	11.8500 GHz	49.0 dBi @	14.2500 GHz			
Maximum total input power at antenna flange (Watts) =					62.60			
Maximum aggregate output EIRP for all carriers (dBW) =					66.30			

F) Remote Control Point:

Int v240M 4400 S. SAM HOUSTON PKWY. E
HOUSTON, HARRIS, TX 77046
832-668-2775

Call Sign:



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F) Remote Control Point:

Int v240M	4400 S. SAM HOUSTON PKWY. E HOUSTON, HARRIS, TX 77046 832-668-2775	Call Sign:
ORB7108	4400 S. SAM HOUSTON PKWY E. HOUSTON, HARRIS, TX 77046 832-668-27775	Call Sign:
ORB7109	4400 S. SAM HOUSTON PKWY E. HOUSTON, HARRIS, TX 77046 832-668-2775	Call Sign:
Oceans	4400 S. Sam Houston Pkwy. E. Houston, Harris, TX 77046 832-668-2775	Call Sign: E030170

G) Antenna Structure marking and lighting requirements:

None unless otherwise specified under Special and General Provisions

H) Special and General Provisions

- A) This RADIO STATION AUTHORIZATION is granted subject to the following special provisions and general conditions:
- 105 --- Subject to Rule Making: This license is subject to the outcome of any future rule making concerning ESV operations. Grant of this authorization shall not prejudice the outcome of any rulemaking.
 - 1010 --- Applicable to all receiving frequency bands. Emission designator indicates the maximum bandwidth of received signal at associated station(s). Maximum EIRP and maximum EIRP density are not applicable to receive operations.
 - 1900 --- Applicable to all transmitting frequency bands. Authority is granted to transmit any number of RF carriers with the specified parameters on any discrete frequencies within associated band in accordance with the other terms and conditions of this authorization, subject to any additional limitations that may be required to avoid unacceptable levels of inter-satellite interference.
 - 2916 --- Transmitter(s) must be turned off during antenna maintenance to ensure compliance with the FCC-specified safety guidelines for human exposure to radiofrequency radiation in the region between the antenna feed and the reflector. Appropriate measures must also be taken to restrict access to other regions in which the earth station's power flux density levels exceed the specified guidelines.



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H) Special and General Provisions

A) This RADIO STATION AUTHORIZATION is granted subject to the following special provisions and general conditions:

- 2938 --- Upon completion of construction, each licensee must file with the Commission a certification including the following information: (1) name of the licensee, (2) file number of the application, (3) call sign of the antenna, (4) date of the license, (5) certification that the facility as authorized has been completed, (6) certification that each antenna facility has been tested and is within 2 dB of the pattern specified in Section 25.209, and (7) certification that the station is operational (including the date of commencement of service) and will remain operational during the license period unless the license is submitted for cancellation.
- 3219 --- All existing transmitting facilities, operations and devices regulated by the Commission must be in compliance with the Commission's radiofrequency (RF) exposure guidelines, pursuant to Section 1.1307(b)(1) through (b)(3) of the Commission's rules, or if not in compliance, file an Environmental Assessment (EA) as specified in Section 1.1311. See 47 CFR § 1.1307 (b) (5).
- 5208 --- The licensee shall take all necessary measures to ensure that the antenna does not create potential exposure of humans to radiofrequency radiation in excess of the FCC exposure limits defined in 47 CFR 1.1307(b) and 1.1310 wherever such exposures might occur. Measures must be taken to ensure compliance with limits for both occupational/controlled exposure and for general population/uncontrolled exposure, as defined in these rule sections. Compliance can be accomplished in most cases by appropriate restrictions, such as fencing. Requirements for restrictions can be determined by predictions based on calculations, modeling, or by field measurements. The FCC's OET Bulletin 65 (available on-line at www.fcc.gov/oet/rfsafety) provides information on predicting exposure levels and on methods for ensuring compliance, including the use of warning and alerting signs and protective equipment for workers.
- 5216 --- All operations shall be on a non-common carrier basis.
- 90013 --- The licensee shall not operate in the band 14.0-14.2 GHz within 125 km of the NASA TDRSS facilities on Guam (located at latitude 13°36'55" N, longitude 144°51'22" E) or White Sands, New Mexico (located at latitude 32°20'59" N, longitude 106°36'31" W and latitude 32°32'40" N, longitude 106°36'48" W), or any future TDRSS facility NTIA notifies to the FCC, unless and until the licensee enters into an agreement with NASA that NTIA has approved. The licensee must conform its operations to the terms of any coordination agreement with the NASA and must file a copy of the agreement with the Commission within 30 days of execution.
- 90014 --- The licensee shall not operate in the band 14.47-14.50 GHz within (a) 45 km of the radio observatory on St. Croix, Virgin Islands (located at latitude 17°46' N, longitude 64°35' W); (b) 125 km of the radio observatory on Mauna Kea, Hawaii (located at latitude 19°48' N, longitude 155°28' W); and (c) 90 km of the Arecibo Observatory on Puerto Rico (located at latitude 18°20'46" N, longitude 66°45'11" W) unless and until the licensee enters into an agreement with the National Science Foundation that has been approved by NTIA. The licensee must conform its operations to the terms of any coordination agreement with the National Science Foundation and must file a copy of the agreement with the Commission within 30 days of execution.
- 90285 --- Operations in international waters and in territorial waters of other countries must be in compliance with the applicable laws, regulations, and licensing procedures of other countries, as well as with the conditions of this authorization.



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H) Special and General Provisions

A) This RADIO STATION AUTHORIZATION is granted subject to the following special provisions and general conditions:

90295 --- The licensee shall not operate in the band 14.0-14.2 GHz within 125 kilometers (km) of the NASA TDRSS facilities in Blossom Point, Maryland (latitude 38° 25' 44" N.L., longitude 77° 05' 02" W.L.), unless and until the licensee enters into an agreement with NASA that NTIA has approved. The licensee must conform its operation with the Commission within 30 days of execution.

B) This RADIO STATION AUTHORIZATION is granted subject to the additional conditions specified below:

This authorization is issued on the grantee's representation that the statements contained in the application are true and that the undertakings described will be carried out in good faith.

This authorization shall not be construed in any manner as a finding by the Commission on the question of marking or lighting of the antenna system should future conditions require. The grantee expressly agrees to install such marking or lighting as the Commission may require under the provisions of Section 303(q) of the Communications Act. 47 U.S.C. § 303(q).

Neither this authorization nor the right granted by this authorization shall be assigned or otherwise transferred to any person, firm, company or corporation without the written consent of the Commission. This authorization is subject to the right of use or control by the government of the United States conferred by Section 706 of the Communications Act. 47 U.S.C. § 706. Operation of this station is governed by Part 25 of the Commission's Rules. 47 C.F.R. Part 25.

This authorization shall not vest in the licensee any right to operate this station nor any right in the use of the designated frequencies beyond the term of this license, nor in any other manner than authorized herein.

This authorization is issued on the grantee's representation that the station is in compliance with environmental requirements set forth in Section 1.1307 of the Commission's Rules. 47 C.F.R. § 1.1307.

This authorization is issued on the grantee's representation that the station is in compliance with the Federal Aviation Administration (FAA) requirements as set forth in Section 17.4 of the Commission's Rules. 47 C.F.R. § 17.4.

The following condition applies when this authorization permits construction of or modifies the construction permit of a radio station.

This authorization shall be automatically forfeited if the station is not ready for operation by the required date of completion of construction unless an application for modification of authorization to request additional time to complete construction is filed by that date, together with a showing that failure to complete construction by the required date was due to factors not under control of the grantee.

Licensees are required to pay annual regulatory fees related to this authorization. The requirement to collect annual regulatory fees from regulatees is contained in Public Law 103-66, "The Omnibus Budget Reconciliation Act of 1993." These regulatory fees, which are likely to change each fiscal year, are used to offset costs associated with the Commission's enforcement, public service, international and policy and rulemaking activities. The Commission issues a Report and Order each year, setting the new regulatory fee rates. Receive only earth stations are exempt from payment of regulatory fees.